SUPPLEMENTAL APPENDIX

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APPELLEES' SUPPLEMENTAL APPENDIX

1. Excerpts from United States Patent Office "Manual of Patent Examining Procedure" (current issue)

706.03(s) Statutory Bar

Another category of rejections not based on the prior art finds a basis in some prior act of applicant, as a result of which the claim is denied him.

* * * * * * * * * *

OWN PRIOR FOREIGN PATENT

Extract from 35 U.S.C. 102. Conditions for patentability; novelty and loss of right to patent. A person shall be entitled to a patent unless—

* * * * * * * * * *

> (d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States.

The statute above quoted establishes four conditions which, if all are present, establish a bar against the granting of a patent in this country:

(1) The foreign application must be filed more than one year before the filing in the United States.

(2) It must be filed by the applicant, his legal representatives or assigns.

(3) The foreign patent must be actually granted (e.g., by sealing of the papers in Great Britain) before the filing in the United States or, since foreign procedures differ, the act from which it can be said that the invention was patented, has occurred. It need not be published.

Ex parte Gruschwitz et al., 138 USPQ 505 discusses the meaning of "patented" as applied to German procedures.

(4) The same invention must be involved.

If such a foreign patent is discovered by the examiner, the rejection is made under 35 U.S.C. 102(d) on the ground of *statutory bar.*

* * * * * * * * * *

2. Testimony of Michel Laurent, Citizen of France July 11, 1972 and July 14, 1972

(July 11, 1972)

THE COURT: All right, we're going to take Mr. Laurent. Does the gentleman speak English, Mr. Greenfield?

MR. GREENFIELD: He speaks English, Your Honor, but not fluently and I think we'd better—(interrupted)

THE COURT: Well, we will use the same method for his convenience.

CLERK: Do you solemnly swear that the testimony that you are about to give in this case is the truth, the whole truth and nothing but the truth, so help you God?

MR. LAURENT: I do.

DIRECT EXAMINATION BY MR. MANN:

MR. MANN: Mr. Laurent, would you please state your name, age, and present address.

MR. LAURENT: Michel Laurent. I am a French citizen and I am a resident of Lyon, France, and my home address is 31 Rue Boileau.

MR. MANN: What is your trade, business, or occupation at the present time?

MR. LAURENT: I am a conseil en brevets.

MR. MANN: And how long have you been so engaged, sir?

MR. LAURENT: I am engaged as a conseil en brevets since April 1, 1971.

MR. MANN: Are you independently employed?

MR. LAURENT: Yes, I am.

MR. MANN: And have been prior to April of 1971?

MR. LAURENT: Prior to 1971 I was an employee of Rhodiaceta.

MR. MANN: How long were you employed by Rhodiaceta?

MR. LAURENT: Since July 2, 1962.

* * * * * * * * * *

MR. MANN: Describe for us, if you will, the nature and the type of work which you did while employed by Rhodiaceta.

MR. LAURENT: In the period from 1962 to September, 1967, I was employed without interruption at the Patent Department of Rhodiaceta, and in the period from September, 1967, to April 1, 1971, at the Licensing Department of the company Rhodiaceta.

MR. MANN: Were you at any time employed by Chavanoz?

MR. LAURENT: No.

MR. MANN: Have you at any time been employed by a concern you refer to as ARCT?

MR. LAURENT: No.

MR. MANN: Were you in any way during your employment by Rhodiaceta associated with or work with Mr. Leo Soep?

MR. LAURENT: What do you mean by "associated or working with"?

MR. MANN: Did your relationship, your employment by Rhodiaceta, place you in a position where you worked with Mr. Soep?

MR. LAURENT: In connection with, yes.

MR. MANN: In connection with?

MR. LAURENT: Mr. Leo Soep, yes.

MR. MANN: What was the nature of the work which you performed with Mr. Soep?

MR. LAURENT: Mr. Soep was acting as consultant, as counsel for Chavanoz, and I was also acting as counsel for Chavanoz.

* * * * * * * * * *

(Resumed Direct Examination of Michel Laurent Citizen of France by Mr. Park, on July 14, 1972)

MR. PARK: * * * * Now, Mr. Laurent, the next question I ask, when I speak of the French patent law, I will be talking about the old French patent law which was in effect prior to 1968. Will you accept that?

MR. LAURENT: Sure.

MR. PARK: All right, sir. Now, will you very briefly tell us what the procedure was under the old French patent law for obtaining a patent?

MR. LAURENT: Before 1968 there was in force in France the system that had its inception in 1844 of the French patents under the so-called "without examination" system. Now, without going into a course of French patent practice, allow me to state to you very briefly the essential features of this system. The applicant filed a text followed by a resume and, if indicated, by a drawing. This text became automatically, except for a few cases, what later on issued as a patent, without any guaranty on the part of the government as to the novelty features contained therein. But it was understood by the law and defined by the pronouncements of the French courts that all that is described and set forth in the patent was covered by the patent.

MR. PARK: All right, sir, and there was no examination by the French Patent Office on the merits of the subject matter of the application, is that correct?

MR. LAURENT: That is correct.

MR. PARK: And the only requirement for a valid patent in France was that the subject matter be novel, is that correct?

MR. LAURENT: That is correct.

MR. PARK: After you file a patent application, what happened to it toward the issuance of the patent?

MR. LAURENT: The basic assumption is that the patent is prepared in its proper form. After examination, in order to determine that the invention set forth in the patent does not enter the field of national defense, your patent application was issued by way of a ministerial

decree according to which the French government acknowledges a certain ownership title as to the aspects, the features that the applicant has described in his application. A few weeks thereafter, say two to three months, the application of the patent was issued and made available for public inspection by printing it in abruge (sic), in other words, a summary version thereof, in the official gazette. A few months later the patent was published as a patent. Now, all of these practices did not apply with regard to special patents in the field of medicine and medication, and between the moment the application was published and the resume was published in the official gazette—since the moment of the filing of the application and the publication of the resume in the official gazette, there was a lapse of 15 to 18 months during which the content of that application was kept strictly secret.

MR. PARK: That was with regard to medical patents?

MR. LAURENT: Yes, because for pharmaceutical patents at that time we had a novelty examination.

MR. PARK: Now, I am going to direct my following question to non-medical related patents. In your answer you said that after the examination to see whether the patent application involved national defense or in any way affected national defense, it was issued by a decree, is that correct?

MR. LAURENT: That is correct, by a narrative.

MR. GREENFIELD: Your Honor, I think I now see the purpose of this examination and I'd like to object to it on this ground: An important legal issue in this case will be the question of United States law involving Section 102(d) of the United States Patent Act, and I will have to read part of that to explain the objection: "A person shall be entitled to a patent unless the invention was first patented or caused to be patented by the applicant or his legal representative or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than 12 months before the filing of the application in the United States." And the

key question of United States law is when the invention was patented in the foreign country.

THE COURT: Actually, it is when the application was made.

MR. GREENFIELD: Well, it involves both, but one of the questions which I am positive will be disputed here in this case is on what date it was patented in the foreign country because I don't think there are going to be any disputes of fact as to the date of application. That is a question of United States law and I don't think it is proper to examine this witness on it. At this point they are examining him as an expert on French law. They have no right to do so. He is not their expert witness and they are not paying him. He is an expert in this matter on our side and they have no right to ask him for his opinion on French or American law.

THE COURT: He is a conseil en brevets for the Republic of France, as I understand it.

MR. GREENFIELD: That doesn't give them the right to pick his brains as an expert on the stand. You just can't call another side's person and start asking him about his general technical knowledge. They filed 13 affidavits or so on the Soep motion. They have no end of—(Interrupted).

THE COURT: I don't know why they can't. I have allowed depositions of adversary experts every week.

MR. GREENFIELD: I didn't hear that.

THE COURT: I say, I have allowed depositions of adversary experts, lawyers, doctors, and what not, every week. What case do you have to say they can't examine him?

MR. GREENFIELD: At my fingertips, none, and maybe I am wrong, but it has always been my understanding that unless the other side puts their expert on, you just can't call him and start picking his brains.

THE COURT: You listen to 20 people who you say know something about a subject and the adversary can depose on the discovery rules of this court, every one of them, whether or not they are experts.

MR. GREENFIELD: I will abide by that ruling.

THE COURT: If you can show me anything to the contrary, I'd like to know, because I've been making a lot of mistakes.

MR. GREENFIELD: I've made a few myself, but I think it is certainly improper to ask him a question about United States law, under Section 102(d).

THE COURT: I thought he was asking the gentleman about the French procedure.

MR. GREENFIELD: And this has nothing to do with 102(d)?

THE COURT: It may have eventually, but he has a right to ask a man who is a patent counsel recognized as a patent expert by his native country, certified, he has a right to ask him about it, certainly. And especially since this gentleman's participation, while limited, according to the testimony presented, to one patent, his participation was on behalf of one of the litigants in this case.

MR. GREENFIELD: With respect to that one patent, yes.

THE COURT: I understand that, but just the same, he has testified and he has the right to probe to see if he has some other information leading to further discovery or evidence on the issues. Yes, sir, Mr. Brumbaugh, I'll be glad to hear you.

MR. BRUMBAUGH: Your Honor, I'd like to add a comment here, and that is, I think the problem here is that the problem involves the word "issue."

MR. PARK: I haven't used the word "issue."

MR. BRUMBAUGH: I think the witness has. The word "issue" has a particular legal significance in our law and the difficulty is the witness is not qualified to interpret United States law. If he were qualified as an expert—(Interrupted).

THE COURT: Yes, and if he asked him to interpret United States law and you objected, I'd sustain the objection. But that is not what he is asking. Do I correctly understand your question?

MR. PARK: Yes, sir, exactly. I am not asking about United States law.

THE COURT: All right.

MR. PARK: Mr. Laurent, would you please tell us at what point in time in French patent procedure does the patent become effective as a tool in France to assert against alleged infringement?

MR. LAURENT: May I use the blackboard, it will be much easier.

THE COURT: Certainly. What you really mean is, when does the monopoly which the patent creates become effective?

MR. PARK: Your Honor, I will accept your question in lieu of mine.

THE COURT: A patent is a monopoly. It has been so held, I believe, by the American courts.

MR. PARK: Mr. Tannenbaum, will you rephrase it as His Honor stated it?

(Reporter repeats question as phrased by the Court.)

MR. LAURENT: The patent application is filed under date "A".

MR. PARK: Mr. Schilling, will you please put "delivery" in the record.

REPORTER: I haven't really got an answer from him yet.

MR. GREENFIELD: I think Mr. Park will agree that on some of these key terms we'd better not even translate them, just take the French term directly.

MR. PARK: Yes.

MR. LAURENT: Generally speaking, at least one year after the filing. A few months thereafter, the brevet delivery, the patent delivery, is made available to the public, to the fact that it is inserted in the official gazette, and then it is published under date "C". The date on which a patent can be asserted is the date of B, or any period between "A" and "B", the date being in fact the date at which a patent can be asserted, the date of its publication in the official gazette; provided, however, that the infringer has been served with a certified copy of the patent.

MR. PARK: So that the owner of the patent has the right between the date "A," the filing date, and date "B," the

delivery date, to assert his patent against an infringer if he delivers a certified copy of that patent application and gives the infringer a notice of it. Is that your testimony?

MR. LAURENT: Yes.

MR. PARK: At what point in time with respect to "A" through "C" letters that you have there does the patent owner have the right to collect damages from an infringer?

[COLLOQUY BETWEEN COUNSEL AND COURT OMITTED]

MR. LAURENT: There are two possibilities. If the patent has been delivered and made available for public inspection through insertion in the official gazette, one can serve notice through judicial action, through court action, to the party being the presumed infringer. There is another possibility, that one does not serve notice of being the holder of the patent, but serves a certified copy issued by the Patent Office. The second possibility is the fact that one submits a certified copy, certified, conformed, true and correct copy by the Patent Office and then takes legal action. In both cases one can obtain damages only if one has filed legal action in proper and due form, and the onset of damages can start in the first hypothetical cases at point "B," and in the second hypothetical cases with the serving of the official copy.

MR. PARK: And what is the earliest date that you can obtain the official copy under French patent practice, a certified copy?

MR. LAURENT: Under the old French law?

MR. PARK: Yes.

MR. LAURENT: I do not recall exactly, but please keep in mind the following: All patents that have been filed are automatically placed under secrecy so that the national defense authorities can have an opportunity to select those likely to be of interest to them, and this way take a period of three to four months. Then your application passes through a number of different departments and it may be one week to three to four months that you can obtain such a copy.

MR. PARK: You can—?

MR. LAURENT: You can obtain such a copy. And the time lapse to obtain a certified copy is one week up to three to four months.

MR. PARK: And this is before the delivery date?

MR. LAURENT: Prior to the date on which it is made available to the public.

MR. PARK: But it can also be obtained before the delivery date, can it not?

MR. LAURENT: Yes.

MR. BRUMBAUGH: Could that question be clarified, obtained by whom?

MR. PARK: By the owner of the patent?

MR. LAURENT: Only.

MR. PARK: All right, the owner of the patent can obtain the certified copy prior to the delivery date.

MR. LAURENT: Only the owner of the patent or his attorney.

* * * * * * * * * *

RÉPUBLIQUE FRANÇAISE

MINISTÈRE DE L'INDUSTRIE

SERVICE de la PROPRIÉTÉ INDUSTRIELLE

BREVET D'INVENTION

P.V. n° 994.328 — N° 1.427.091

Classification internationale : D 02 d — D 03 c

Perfectionnements aux métiers fausse torsion pour la texturisation de fils synthétiques.

Société dite : MOULINAGE ET RETORDERIE DE CHAVANOZ résidant en France (Isère).

Demandé le 13 novembre 1964, à 14h 39m, à Paris.

Délivré par arrêté du 27 décembre 1965.

(*Bulletin officiel de la Propriété industrielle*, n° 6 de 1966.)

Brevet d'invention dont la délivrance a été ajournée en exécution de l'article 11, § 7, de la loi du 5 juillet 1844 modifiée par la loi du 7 avril 1902.)

Il est connu de texturiser des fils synthétiques sur des métiers « fausse torsion », c'est-à-dire comportant des broches donnant aux fils une fausse torsion qui remonte en arrière dans des éléments de chauffage, assurant la fixation de la fausse torsion au refroidissement ultérieur. Ce procédé de texturisation a pris un très grand développement ces dernières années et le matériel nécessaire a en même temps subi une évolution importante.

Dans un des systèmes utilisés dans ce domaine les fils subissent le chauffage au contact avec des éléments chauffants métalliques convexes fixes. Initialement on avait prévu des éléments creux avec circulation intérieure d'un fluide chauffé à une température constante réglée. Par la suite, on a mis en œuvre le fluide électrique également avec réglage approprié. Le dispositif employé était d'abord une tige métallique cintrée, dite « baleine de parapluie », constituant elle-même la résistance électrique chauffée par effet Joule. Par la suite cette tige a été remplacée par un tube métallique cintré monté précédemment en résistance électrique. Ces tubes avaient l'avantage d'une isolation thermique plus facile. Tous les tubes étaient réunis en série et étaient soigneusement tarés pour assurer une température constante de tube à tube.

Pour la mesure de la température et en vue de permettre le réglage un des tubes au moins d'un métier était exempt de fil et contenait une sonde thermique reliée à des instruments de contrôle et de réglage.

L'objet de la présente invention est un tube de chauffage pour métiers « fausse torsion » avec une section à plusieurs lobes subdivisant le tube en plusieurs canaux juxtaposés, un canal contenant une sonde thermique, électrique, alors que les autres canaux contiennent le passage de fils à chauffer. Chaque tube actif fait partie d'une position de travail avec d'autres éléments tubulaires, c'est-à-dire notamment une bobine débitrice, des délivreurs, une broche de fausse torsion et une bobine de réception.

L'invention ne s'étend pas seulement aux tubes cintrés à chauffage électrique direct par résistance, mais également aux tubes droits. Le chauffage peut également être indirect. De toute façon l'invention n'est nullement limitée à l'exemple de réalisation ci-après, mais couvre toute variante dans le même esprit. Le but est un élément de chauffage à plusieurs canaux parallèles dont un contient une sonde thermique, alors que les autres servent au passage de fil, la sonde se trouvant dans les mêmes conditions thermiques que les fils.

Le système a de plus l'avantage de permettre une multiplication de la production des métiers qui est évidemment déterminée en premier lieu par le nombre de canaux de passage de fil. Avec des tubes ayant une section à trois lobes on double la production pour une même vitesse de travail. Un autre avantage est que chaque position de travail peut être contrôlée effectivement et efficacement quant au régime thermique.

L'exemple de réalisation permettra de mieux comprendre l'invention qui est illustrée par le dessin schématique sur la planche annexée.

Dans le dessin on a représenté un exemple de réalisation avec un tube ayant une section à 3 lobes, en « feuille de trèfle ». Un tel tube peut être obtenu par passage d'un tube plus grand dans une filière appropriée, déformant le tube.

Le tube de l'exemple représenté en section, comporte 3 canaux (1), (2), (3), reliés par des diaphragmes (4), (5), (6), créés à la déformation du tube initial. Ces diaphragmes peuvent être clos par serrage complet des cloisons opposées, comme dans la section représentée, mais ce n'est pas obligatoire.

Le canal (1) contient une sonde thermique reliée à des appareils de contrôle et de réglage permet-

tant de vérifier la température du canal (1) à chaque moment et à la maintenir entre des limites étroites prédéterminées.

Les canaux (2) et (3) contiennent des fils (8) et (9), subissant le chauffage [illegible]

Dans le chauffage direct par résistance du tube la température est la même partout, sous réserve de pertes par radiation qui peuvent différer légèrement par les 3 canaux, si l'isolation thermique n'est pas absolument uniforme.

RÉSUMÉ

1° Perfectionnement aux métiers « fausse torsion » pour la texturisation de fils synthétiques et remarquable en ce que les métiers comportent des tubes de chauffage avec une section à plusieurs lobes, formant des canaux parallèles multiples dont un contient une sonde thermique, reliée à des appareils de contrôle et de réglage, alors que les autres servent au passage de fils à chauffer individuellement pour la fixation de la fausse torsion appliquée par des broches individuelles en aval des tubes.

L'invention peut comprendre en outre les [illegible] ments ci-après isolément ou en combinaisons [illegible] ques :

a. Les tubes peuvent être chauffés par [illegible] moyens;

b. On utilise le chauffage électrique, direct [illegible] indirect;

c. Les tubes peuvent être droits ou cintrés;

d. On utilise notamment un tube cintré, à chauffage direct par résistance et avec une section à [illegible] lobes, avec diaphragmes intermédiaires cloisonnés ou non.

2° Métiers « fausse torsion » pour la texturisation de fils synthétiques et avec productivité augmentée du fait du passage simultané de plusieurs fils dans les tubes de chauffage, subdivisés en canaux individuels jumelés.

Société dite :
MOULINAGE ET RETORDERIE DE CHAVANOZ
Par procuration :
L. Sotr

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N° 1.427.001 — Société dite : — Pl. unique

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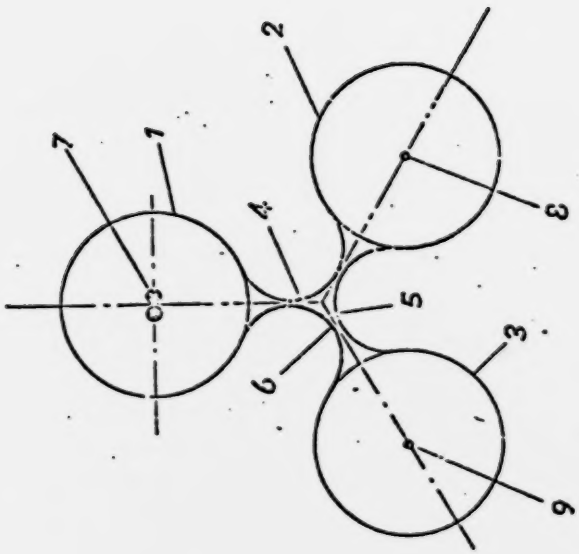

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French Republic
Ministry of Industry
Patent Service

PATENT
P.V. No. 994,828
International class.

No. 1,427,001
D 02 d—D 05 c

Improvements in false twist frames to texturize synthetic yarns

Company known as: Moulinage et Retorderie de Chavanoz, residing in France (Isere)

Filed November 13, 1964 at 1439 hours at Paris
Allowed by order of December 27, 1965

(Bulletin officiel de la Propriete industrielle, No. 6 of 1966)

(Patent whose allowance was delayed pursuant to article 11, 7 of the law of July 5, 1844 as amended by the law of April 7, 1902)

It is known how to texturize synthetic yarns on false twist frames, i.e., comprising spindles giving the yarns a false twist which goes back up in the heating elements, assuring the setting of the false twist upon further cooling. This texturizing process has been greatly developed in recent years and at the same time the necessary equipment has undergone a considerable evolution.

In one of the systems used in this field the yarns undergo heating in contact with stationary convex metal heating elements. Initially, hollow elements had been provided with interior circulation of a fluid heated to a regulated constant temperature. Then, electric current also was used with suitable regulation. The device used was first a curved metal channel, called "umbrella ribs," itself constituting the electric resistance heated by Joule effect. Then this channel was replaced by a curved

metal tube previously mounted in an electric resistance. The tubes had the advantage of an easier thermal insulation. All the tubes were joined in series and were carefully calibrated to assure a constant temperature from tube to tube.

To measure the temperature and for its regulation, at least one of the tubes of the frame was free of yarn and contained a thermal probe connected to control and regulating instruments.

The object of the present invention is a heating tube for false twist frames with a section with several lobes subdividing the tube into several twin channels, one channel containing an electric, elastic probe, whereas the other channels permit the passage of the yarns to be heated. Each active channel is part of a work position with the other usual elements, i.e., particularly, a delivery reel, delivery rolls, a false twist spindle and a receiving reel.

The invention extends not only to the curved tubes with direct electric heating by resistance, but also to the straight tubes. Heating can also be indirect. In any case, the invention is in no way limited to the following embodiment. but covers any variant in the same spirit. The purpose is a heating element with several parallel channels one of which contains a thermal probe, whereas the others serve for passage of the yarn, the probe being under the same thermal conditions as the yarns.

The system further has the advantage of permitting the multiplication of the production of frames which is obviously governed in the first place by the number of yarn passage channels. With tubes having a section with three lobes, production is doubled for the same working rate. Another advantage is that each working position can be controlled effectively in regard to the thermal conditions.

The example of embodiment will make it possible to understand better the invention which is illustrated by the hypothetical drawing on the accompanying sheet.

Translation

In the drawing, there is shown an embodiment with a tube having a 3-lobe section, like a clover leaf. Such a tube can be obtained by passage of a larger tube in a suitable die, deforming the tube.

The tube of the example, shown in section, comprises 3 channels 1, 2, 3, connected by diaphragms 4, 5, 6, created upon deformation of the initial tube. These diaphragms can be closed by complete locking of the opposite partitions, as in the section shown, but it is not obligatory.

Channel 1 contains a thermal probe connected to control and regulation apparatus making it possible to check the temperature of channel 1 at each moment and to keep it in narrow predetermined limits.

Channels 2 and 3 contain yarns 8 and 9, undergoing heating.

In direct heating by resistance of the tube the temperature is the same everywhere, except for losses by radiation, which can differ slightly, by the three channels, if the thermal insulation is not absolutely uniform.

Claims

1. Improvement in false twist frames for texturizing of synthetic yarns and remarkable in that the frames comprise heating of tubes with several lobes, forming multiple parallel channels one of which contains a thermal probe, connected to control and regulating apparatus, whereas the others serve for the passage of the yarns to be heated individually for setting of the false twist applied by individual spindles upstream from the tubes.

The invention can further comprise the following elements separately or in any combinations:

a. The tubes can be heated by any means;

b. Direct or indirect electric heating is used;

Translation

c. The tubes can be straight or curved;

d. Particularly, use is made of a curved tube, with direct heating by resistance with a 3-lobe section, with or without intermediate partitions.

2. False twist frames for texturizing of synthetic yarns and with productivity multiplied by the fact of the simultaneous passage of several yarns in heating tubes, subdivided into twin individual channels.

Company known as:
Moulinage et Retorderie de Chavanoz
by attorney:
L. SOEP

B 18

ÉTUDE

à Maître [illegible] de HENDAYE

DÉCLARATION DE SIÈGE DE BIENS

DÉCLARATION DE SIÈGE DE BIENS

MANDATAIRE

NOM & PRÉNOMS ou RAISON SOCIALE et FORME JURIDIQUE

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Pour cession

Pour nantissement

Pour saisie

Pour opposition

Pour vente

Pour location

Pour bail

Pour sous-location

Pour sous-bail

Pour sous-traitance

Pour sous-contrat

Pour sous-marché

Pour sous-commande

Pour sous-achat

Pour sous-vente

ARTICLE 11 OF THE FRENCH PATENT LAW OF 1844 AS AMENDED UP TO MAY 20, 1955

ART. 11 (*loi du 7 avril 1902*).—Les brevets dont la demande aura été régulièrement formée seront délivrés sans examen préalable, aux risques et périls des demandeurs, et sans garantie soit de la réalité, de la nouveauté ou du mérite de l'invention, soit de la fidélité ou de l'exactitude de la description.

Un arrêté du Ministre, constatant la régularité de la demande, sera délivré au demandeur et constituera le brevet d'invention.

A cet arrêté sera joint un exemplaire imprimé de la description et des dessins mentionnés dans l'article 24, après que la conformité avec l'expédition originale en aura été reconnue et établie au besoin.

La première expédition des brevets sera délivrée san frais.

Toute expédition ultérieure, demandée par le breveté ou ses ayants cause, donnera lieu au payement d'une taxe.

Les frais de dessin, s'il y a lieu, demeureront à la charge de l'impétrant.

La délivrance n'aura lieu qu'un an après le jour du dépôt de la demande, si ladite demande renferme une réquisition expresse à cet effet (loi du 27 janvier 1944). Celui qui aura requis le bénéfice de cette disposition pourra y renoncer à un moment quelconque de ladite période d'un an.

Le bénéfice de la disposition que précède ne pourra être réclamé par ceux qui auraient déjà profité des délais de priorité accordés par des traités de réciprocité, notamment par l'article 4 de la Convention internationale pour la protection de la propriété industrielle du 20 mars 1883.

TRANSLATION OF ARTICLE 11 OF THE FRENCH PATENT LAW OF 1844 AS AMENDED UP TO MARCH 20, 1955

Art. 11.

Patents applied for in due form shall be granted without examination, at the risk and peril of the applicants and without guarantee of the reality, novelty, or merit of the invention, or the accuracy or correctness of the specification.

A decree of the Minister certifying the regularity of the application shall be issued to the applicant and shall constitute the patent of invention.

To this decree shall be annexed a printed copy of the specification and drawings mentioned in Article 24 after its conformity with the original has been verified and, if necessary, established.

The first copy of patents shall be delivered gratis.

All subsequent copies required by the patentee or by persons authorized by him shall be subject to a tax.

The cost of the drawings, if any, shall be paid by the person requesting them.

The patent shall not be issued until one year after the date of filing the application if the said application contains an express request to that effect.

Any person who shall have requested the benefit of this provision may renounce it at any time within said one year period.

The benefit of the foregoing provision cannot be claimed by persons who have already profited by periods of priority given by treaties of reciprocity, and especially by Article 4 of the International Convention for the Protection of Industrial Property of March 20, 1883.

B 21

May 14, 1968 H. CROUZET 3,382,656

FALSE-TWIST FRAMES AND METHOD FOR TEXTURING SYNTHETIC FILAMENTS

Filed Jan. 3, 1966

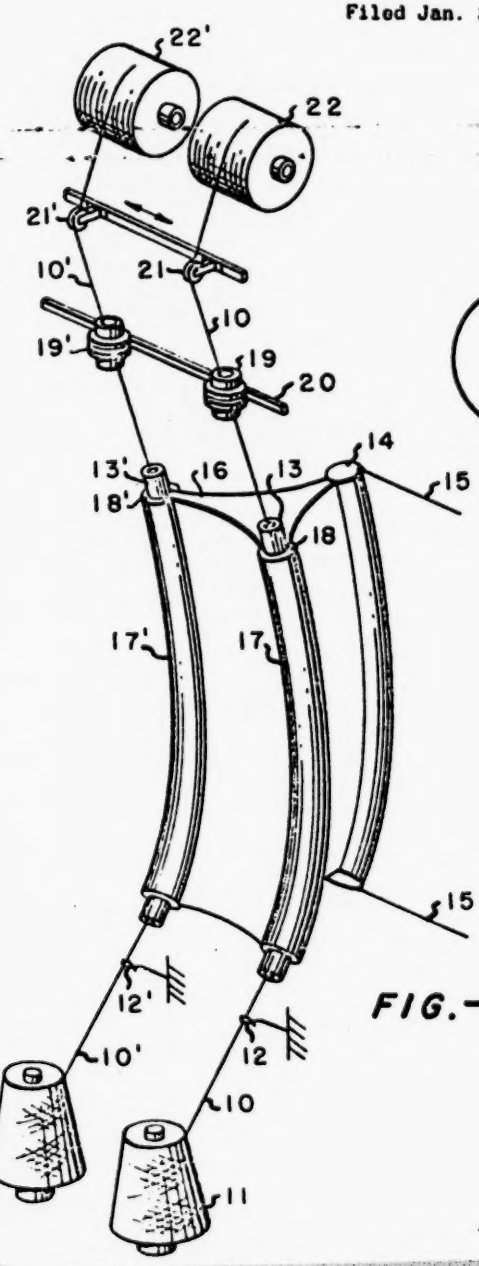

FIG.-2-

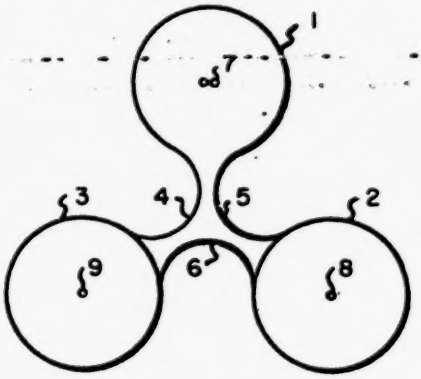

FIG.-1-

INVENTOR.
HENRI CROUZET

BY

ATTORNEY

United States Patent Office 3,382,656 Patented May 14, 1968

3,382,656

FALSE-TWIST FRAMES AND METHOD FOR TEXTURING SYNTHETIC FILAMENTS

Henri Crovetto, Rives, Isère, France, assignor to Moulinage et Retorderie de Chavanoz, Chavanoz, Isere, France, a corporation of France

Filed Jan. 3, 1966, Ser. No. 518,410
4 Claims. (Cl. 57—34)

ABSTRACT OF THE DISCLOSURE

A false-twist apparatus for the crimping of a textile yarn including delivery means for advancing the yarn from supply to takeup and between the delivery means, twisting means and heat setting means for application of false twist and for heat setting twist within the yarn. The improvement comprises a heating tube having at least three lobes forming multiple parallel channels, each connected by a heat transfer diaphragm. One of the lobes contains a temperature probe, and at least two other of the lobes serve as passageways for individual filaments. Resistance electrical heating means are provided for heating filaments disposed within the lobes, the filaments being individually heated for setting the false twist applied by an individual spindle downstream of the tube.

It is known to texture synthetic filaments on "false-twist" spinning frames, i.e., spinning frames comprising spindles which impart to the filaments a false twist which progresses backwards into a heating element, which set the false twist on subsequent cooling. This texturing method has been very greatly developed in recent years and the equipment required has at the same time undergone a considerable change.

In one of the systems employed in this field, the threads undergo the heating in contact with fixed convex metallic heating elements. Initially, hollow elements were provided through which there was circulated a fluid heated at a regulated constant temperature. Subsequently, electric heat was employed, also with appropriate adjustment. The device employed was first of all a bent metallic channel, called an "umbrella rib," which constituted in itself the electric resistor heated by the Joule effect. This channel was later replaced by a bent metallic tube connected as before as an electric resistor. Tubes had the advantage that they were more readily thermally insulated. All the tubes were connected in series and were carefully calibrated to ensure a constant temperature from tube to tube.

For measuring the temperature and for adjusting it, at least one of the tubes of a spinning frame was free from filament and contained a temperature probe connected to monitoring and adjusting instruments.

The object of the present invention is to provide a heating tube for "false-twist" spinning frames having a cross-section comprising a number of lobes subdividing the tube into a number of coupled channels, one channel containing a resilient electric probe, while the other channels permit the passage of filaments to be heated. Each active channel forms part of an operating position with the other usual elements, i.e., notably a supply reel, delivery members, a false-twist spindle and a take-up reel.

The invention not only includes bent tubes directly electrically heated by resistance, but also straight tubes. The heating may also be indirect. In any case, the invention is in no way limited to the following embodiment, but covers any variant in the same spirit. The object is to provide a heating element comprising a number of parallel channels, one of which contains a temperature probe, while the others serve for the passage of filament, the probe being subjected to the same thermal conditions as the filaments.

In addition, the system has the advantage that it permits multiplications of the output of the spinning frames, which is obviously primarily determined by the number of channels for the passage of filament. With tubes having a cross-section comprising a plurality of lobes, particularly three lobes, the output is doubled for the same working speed. Another advantage is that each working position may be effectively controlled in regard to the thermal conditions.

The embodiment will enable the invention, which is illustrated by the diagrammatic drawing on the accompanying sheet, to be more readily understood.

In FIGURE 1, there is illustrated an embodiment comprising a tube having a three-lobe or "clover leaf" cross-section. Such a tube may be obtained by passing a larger tube through an appropriate die by which the tube is deformed.

In FIGURE 1, the tube of the example, which is illustrated in section, comprises three channels 1, 2 and 3 connected by diaphragms 4, 5 and 6 created in the deformation of the initial tube. These diaphragms may be closed by complete clamping of the opposed partitions, but this is not essential. Each of the plurality of lobes or tubes may, of course, constitute separate tubes that are interconnected by a good heat conducting means, such as copper or alloy, or equivalent heat conducting metal means.

The channel 1 contains a temperature probe connected to monitoring and adjusting devices for checking the temperature of the channel 7 at each instant and maintaining it between predetermined narrow limits.

The channels 2 and 3 contain filaments 8 and 9 which undergo the heating.

In the direct resistance heating of the tube, the temperature is the same throughout, subject to losses by radiation, which may differ slightly in the same channels, if the thermal insulation is not absolutely uniform.

Referring to FIGURE 2 of the drawing, the filaments 10 and 10' pass from the cones 11 and 11' through guide means 12 and 12' and then through parallel lobes 13 and 13', which in the form shown is curved so that the filaments contact the surfaces of the tubes as they are fed therethrough. In some instances, however, the tubes may be made straight instead of curved and the filaments be caused to contact the sides of the tubes by suitable guide means. The heating tubes that comprise lobes 13 and 13' are connected to tube 14 through heat transfer means 16 with terminals 15 which are connected to a suitable source of electric current for heating the tubes by resistance effect. Lobes 13 and 13' are preferably interconnected by a heat transfer means that is preferably made of the same metal as the lobes, so as to have the same resistance, and is preferably made from a metal known for its high resistance properties, for example, of nickel chrome alloy or metals or alloys of a lower resistance. The applied current is preferably low. The heater tubes 13 and 13' are interconnected by heat transfer means 16. The tubes may be thermally insulated at least in the areas where the tubes are not connected by enclosing them in a larger tube 17 and 17' which are cut away to allow the heat transfer means 16 to be joined to the heater tubes, and are lined by an insulating material, for example, vermiculite which fills the space between the inner wall of the large tubes and surfaces of the heater tubes or resistor tubes 13 and 13'. The ends of the large tube 17 are closed by disc 18 and 18', for example, by a plastic material with an orifice the size of the diameter of tube 13 and 13'.

The filaments after passing through the tubes 13 and 13' are fed through false twist spindles 9 and 18' which

are rotated by simple means indicated as a belt 20 and is adapted to produce a twist in the filament which feeds back on the filament towards the heating tubes 13 and 13' until arrested by contact with the filaments with the surfaces of such tubes. The temperature of the tubes 13 and 13' is adapted to heat the filaments for setting the false twist. Finally, the filaments 10 and 10' pass through a guide 21 and 21' and are then wound onto spools 22 and 22'. Therefore, by means of this invention at least two yarns and actually many more may be advanced through adjacent parallel lobes of a single tube, or through adjacent individual tubes that are interconnected by a suitable heat transfer means with a means located in an adjacent tube that is also connected by heat transfer means to each of the said other lobes or tubes for measuring and controlling temperature throughout the heater tube system.

The invention may comprise in addition the following elements singly or in any combination:

(a) The tubes may be heated by any means.

(b) Direct or indirect electric heating is employed.

(c) The tubes may be straight or bent.

(d) There is employed notably a bent tube directly heated by resistance and having a cross-section comprising three lobes, with optionally partitioned intermediate diaphragms.

Each of the individual yarns that are processed by the method and apparatus of this invention may be false twisted by individual spindles or by a single spindle that twists a number of yarns. In the second case, a special yarn guide means is needed so that the plurality of yarns are properly fed into the false-twist spindle.

Having thus described the invention, what is claimed is:

1. In a false-twist apparatus for the crimping of a textile yarn including delivery means for advancing the yarn from supply to takeup and between said delivery means, twisting means and heat setting twist within the yarn, respectively, the improvement comprising a heating tube having at least three lobes forming multiple parallel channels, each connected by a heat transfer diaphragm, one of said lobes containing a temperature probe, and at least two other of said lobes serving as passageways for individual filaments, resistance electrical heating means for heating filaments disposed within said lobes, whereby the filaments are individually heated for setting the false twist applied by an individual spindle downstream of the tube.

2. The apparatus of claim 1 wherein the heater tube is arcuate in shape.

3. The apparatus of claim 1 further characterized in that the tube is straight.

4. The apparatus of claim 1 wherein the heater tube is comprised of at least four lobes.

References Cited

UNITED STATES PATENTS

2,803,108	8/1957	Stoddard et al.	57—34 XR
2,864,229	12/1958	Seem et al.	57—34
2,869,312	1/1959	Van Dijk	57—34
2,891,375	6/1959	Van Damme et al.	57—34
3,289,400	12/1966	Scragg	57—34

FOREIGN PATENTS

824,942	12/1959	Great Britain.

FRANK J. COHEN, *Primary Examiner.*

W. H. SCHROEDER, *Assistant Examiner.*

B 28 24

DIRECTION
DES CHAMBRES DE COMMERCE ET D'INDUSTRIE
ET DE LA PROPRIETE INDUSTRIELLE

INSTITUT NATIONAL
DE LA
PROPRIETE INDUSTRIELLE

26 bis RUE DE LENINGRAD PARIS 8e
Tél. 387 38 05 523 53 80

DUPLICATA

PARIS, le 27 Décembre 1965

DIVISION DES BREVETS

BUREAU ADMINISTRATIF

MM/

Monsieur Léonard SORP
184 Faubourg St.Honoré
PARIS 8e

Monsieur,

J'ai l'honneur de vous aviser que le brevet d'invention que vous avez demandé le 13 Novembre 1964, sous le N° P.V. : 994.828
au nom de :

Société dite : MOULINAGE ET RETORDERIE DE CHAVANOZ

pour : " Perfectionnements aux métiers fausse torsion pour la texturisation de fils synthétiques "

vient de vous être délivré, par arrêté de ce jour, sous le N° 1427001
(classification internationale : D 02 d // D 06 c

La présente délivrance est faite en application des dispositions de l'article 11 de la loi du 5 Juillet 1844, sans examen préalable, à vos risques et périls et sans garantie soit de la réalité, de la nouveauté ou du mérite de l'invention, soit de la fidélité ou de l'exactitude de la description.

Le brevet vous sera remis ultérieurement, quand l'Institut National de la Propriété Industrielle aura reçu de l'Imprimerie Nationale l'exemplaire imprimé de la description et des dessins, qui doit y être annexé.

Agréez, Monsieur, l'assurance de ma considération distinguée.

Pour le Chef de Service
Directeur de l'Institut National
de la Propriété Industrielle
Pour le Chef de Division

S. Carpentier

VU pour la légalisation de la Signature
de Madame S. CARPENTIER
du Service de la Propriété Industrielle
PARIS, le 6 JUIN 1972

P/L'Administrateur Civil de 2ème Classe
Chef du Bureau des Statuts et de la Réglementation
L'Attaché d'Administration
Sous-Chef du Bureau des Statuts
et de la Réglementation
D. RARAT

AVIS IMPORTANT - Les annuités doivent, sous peine de déchéance, être acquittées chaque année avant le dernier jour du mois de la date anniversaire du dépôt, ou dans les six mois qui suivent moyennant le paiement d'une taxe supplémentaire, même si le titre n'est pas encore délivré.

B 26 25

TRANSLATION

FRENCH REPUBLIC

MINISTRY OF INDUSTRIAL AND SCIENTIFIC DEVELOPMENT

Board of the Chambers of Commerce and Industry and Patents

PATENT OFFICE
26 bis, rue de Leningrad, Paris 8
Tel 387-56-00 522-52-90
DEPARTMENT OF PATENTS
Administration

HVA/

December 27, 1965

Mr. Leonard Soep
184 Faubourg St-Honore
Paris 8

Dear Sir:

I am pleased to inform you that the patent that you have applied for on: NOVEMBER 13, 1964, under Serial No.: 994,828 in the name of:

Company called: MOULINAGE ET RETORDERIE DE CHAVANOZ
for: "Improvements to false twist machines for the texturizing of synthetic yarns"

has just been issued to you, as per decree under today's date, under No. 1,427,001—(international classification: D 02 d// D 06 c)

The present issuance is delivered as per the provisions of article 11 of the law of July 5, 1844, without preliminary examination at your own risk and peril and without guarantee, either of the reality, novelty or merits of the invention, or of the accuracy or correctness of the description.

The patent will be sent to you subsequently, as soon as the Patent Office will have received from the state press the printed

copy of the description and drawings, which must be attached thereto.

Very truly yours,
For the head of Department

Director of Patent Office
For the Division Chief

s/ S. CARPENTIER

For legalization of the signature
of Mrs. S. CARPENTIER, of the
Patent Office,

Paris, June 6, 1972
For the Manager 2nd class
Chief of the Bureau of Statutes and Regulations
P. De Rivoire

The Administration Attache
Assistant Chief of the Bureau of Statutes
and Regulations

s/ D. KARAM
D. Karam

IMPORTANT NOTICE—Annuities must be paid, under penalty of forfeiture, every year prior to the last day of the month of the anniversary date of filing, or within the next six months after payment of an additional tax, even if the patent document has not yet been issued.

B 29 27

Letter From L. Soep to Monsieur Crouzet

Monsieur CROUZET
A. R. C. T.

D. BREVETS
LS/MC

Paris, le 16 novembre 1964

Messieurs,

Nous vous prions de noter que nous avons déposé, le 13.11.64, une demande de brevet sous le numéro

994.828 au nom de MOULINAGE ET RETORDERIE DE CHAVANOZ

pour: "PERFECTIONESMENTE AUX METIERS "FAUSSE TORSIOE" POUR LA TEXTURISATION LE FILS SYNTETIQUES"

Veuillez trouver ci-joint copie du texte déposé.

Veuillez agréer, Messieurs, nos salutations distinguées.

L. SOEP
CV 001828

B 39 A

TRANSLATION

Monsieur CROUZET
A. R. C. T.

D. BREVETS
LS/MC

Paris, le 16 November 1964

Gentlemen,

We beg you to note that we have filed, 11.13.64, an application for patent under the number

994.828 in the name of MOULINAGE ET RETORDERIE DE CHAVANOZ

for: "IMPROVEMENTS IN "FALSE TWIST" MACHINES FOR THE TEXTURIZATION OF SYNTHETIC YARNS"

Please find attached copy of the filed text.

Please accept gentlemen our distinguished salutations.

L. SOEP
CV 001828

B 31 29

LETTER FROM L. SOEP TO DMRC

MOULINAGE ET RETORDERIE DE CHAVANOZ

POUR LA FABRICATION ET LA VENTE DE TOUS TEXTILES SYNTHÉTIQUES

DIRECTION À CHAVANOZ (Isère)

TÉLÉPHONE : LYON (78) 69-74-31
TÉLÉGRAMME : TISER LYON - MCC CHAVANOZ
GARE : PONT-DE-CHÉRUY (Isère)

Mr. NORMAN ARMSTRONG
DURRING - TAYLOR RESEARCH Co
P.O.BOX 1027
SPARTANBURG (S.C.)

V/Référence

V/lettre du

N/Référence D.BREVETS Ls/JL

Objet

CHAVANOZ le
Paris, 8th December 1966

Dear Norman,

Please find herewith a translation made in Great Britain of a patent application filed in France by our company on the 15th of November 1965.

We beg you to examine whether a corresponding application should be filed in the United States.

If you choose to file we want you to postpone the filing till the end of the priority period. Of course, you may adopt the wording in any suitable way ; the translation does not seem to be very good.

Yours sincerely,

L.SOEP

RECEIVED
DEC 11 ...
MEDICAL ...

DN 015844

B 32 30

LETTER FROM DMRC TO L. SOEP

December 12, 1964

Leo M. Soep, Esq.
Moulinage et Retorderie de Chavanoz
5 & 7, Avenue Percier
Paris 8°, France

Dear Leo:

Thank you for sending me with your letter of December 8 a translation of the patent application filed in France by Chavanoz relating to loom improvements. I am passing it along to Walter Mueller for examinatio of the subject matter and to decide whether it would be advantageous to file a corresponding application in the United States prior to Novembe 13, 1965.

When the study has been made, Walter will get in touch with you directly to give you our conclusions.

With kind regards and all good wishes of the season,

Sincerely yours,

Norman C. Armitage

NCA:hm
cc: Mr. W. E. Mueller